Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Nemorubicin

Catalog No: tcsc2020

Available Sizes

Size: 1mg

Size: 5mg

Size: 10mg

Specifications

CAS No:
108852-90-0

Formula:
$C_{32}H_{37}NO_{13}$

Pathway:
Others

Target:
Others

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 47 mg/mL (73.02 mM)

Alternative Names:
Methoxymorpholinyldoxorubicin;PNU 152243;PNU-152243A

Observed Molecular Weight:
643.64

Product Description

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Nemorubicin is a derivative of doxorubicin, and has antitumor activity.

In Vitro: Nemorubicin has antitumor activity, with IC_{70}s of 578 ± 137 nM, 468 ± 45 nM, 193 ± 28 nM, 191 ± 19 nM, 68 ± 12 nM, and 131 ± 9 nM for HT-29, A2780, DU145, EM-2, Jurkat and CEM cell lines, respectively[1]. Nemorubicin acts through nucleotide excision repair (NER) system to exert its activity. Nemorubicin (0-0.3 μM) is more active in the L1210/DDP cells with intact NER than in the XPG-deficient L1210/0 cells. Cells resistant to nemorubicin show increased sensitivity to UV damage[3]. Nemorubicin is cytotoxic to 9L/3A4 cells, with an IC_{50} of 0.2 nM, 120-fold lower than that of P450-deficient 9L cells (IC_{50}, 23.9 nM). Nemorubicin also potently inhibits Adeno-3A4 infected U251 cells with IC_{50} of 1.4 nM. P450 reductase overexpression enhances cytotoxicity of Nemorubicin[4].

In Vivo: Nemorubicin is converted to PNU-159682 by human liver cytochrome P450 (CYP) 3A4 in rat, mouse, and dog liver microsomes[2]. Nemorubicin (60 μg/kg) induces sifnificant tumor growth delay in scid mice bearing 9L/3A4 tumors, but shows no obvious effect on the tumor growth delay of 9L tumors in mice by i.v. or intratumoral injection (i.t.). Nemorubicin (40 μg/kg, i.p.) exhibits no antitumor activity and no host toxicity in mice bearing 9L/3A4 tumors[4].